REMARKS

Applicants request favorable reconsideration of this application in view of the foregoing amendments and the following remarks. Claims 1-18 were pending in the application and were rejected in the Office Action. By way of this amendment, Applicants have: (a) amended claims 1, 3-5, 7, 8, 17, and 18, without adding new matter; and (b) canceled claims 9-16, without prejudice or disclaimer. Accordingly, claims 1-8, 17, and 18 are respectfully presented for further consideration.

1. Rejection of Claims 1-18

The Examiner rejected claims 1-18 under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 5,046,178 ("Hibner"). Preliminarily, this rejection is now moot with respect to claims 9-16, which have been canceled herein, without prejudice or disclaimer. Accordingly, the rejection will be addressed, and respectfully traversed, with respect to claims 1-8, 17, and 18.

A. Claims 1-4 and 17

As amended, claim 1 (*i.e.*, the claim from which claims 2-4 depend) recites, with italic emphasis added:

> An oil pressure control device for use with a vehicle transmission, which transmission has a shift lever that is configured to select a range from among a drive range that advances the vehicle, a reverse range that reverses the vehicle, and a stop range that stops the vehicle, wherein the vehicle has forward and reverse frictional-engagement devices that convert a drive force generated by an engine to a drive force that advances the vehicle or a drive force that reverses the vehicle, wherein the forward frictional-engagement device is engaged by oil pressure in the drive range, wherein the reverse frictional-engagement device is engaged by oil pressure in the reverse range, and wherein both the forward frictional-engagement device and the reverse frictional-engagement device are released in the stop range, the oil pressure control device comprising:
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> a pressure adjusting device that engages or releases the forward frictional-engagement device or the reverse frictional-engagement device by supplying the oil pressure to one of the forward frictional-engagement device and the reverse frictional-engagement device;
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> a sensor that detects a range selected by the shift lever; and
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> a controller that controls the pressure adjusting device based on a signal from the sensor, *wherein the controller is configured to measure a stop-range selected time period during which the stop range is selected after the reverse range*, and wherein the controller functions to control the pressure adjusting device to:
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> supply an initial oil pressure to the forward frictional-engagement device and subsequently decrease the

supplied oil pressure from the initial oil pressure to a predetermined oil pressure, when the drive range is selected after the stop range or the reverse range;

increase the supplied oil pressure at a small increase rate from the predetermined oil pressure during a predetermined time period; and

increase the supplied oil pressure at a large increase rate, after the predetermined time period has elapsed,

wherein, during the predetermined time period, the supplied oil pressure is set depending on the stop-range selected time period.

Claim 17, as amended, similarly recites, with italic emphasis added:

An oil pressure control device for use with a vehicle transmission, which transmission has a shift lever that is configured to select a range from among a drive range that advances the vehicle, a reverse range that reverses the vehicle, and a stop range that stops the vehicle, wherein the vehicle has forward and reverse frictional-engagement devices that convert a drive force generated by an engine to a drive force that advances the vehicle or a drive force that reverses the vehicle, wherein the forward frictional-engagement device is engaged by oil pressure in the drive range, wherein the reverse frictional-engagement device is engaged by oil pressure in the reverse range, and wherein both the forward frictional-engagement device and the reverse frictional-engagement device are released in the stop range, the oil pressure control device comprising:

a pressure adjusting means for adjusting the oil pressure from a pump, and for engaging or releasing the forward frictional-engagement device or the reverse frictional-engagement device by supplying the adjusted oil pressure to one of the forward frictional-engagement device and the reverse frictional engagement device;

a sensor means for detecting a range selected by a driver of the vehicle;

a measurement means for measuring a stop-range selected time period during which the stop range is selected after the reverse range;

a first control means for controlling the pressure adjusting means to supply an initial oil pressure to the forward frictional-engagement device and subsequently decrease the supplied oil pressure from the initial oil pressure to a predetermined oil pressure, when the drive range is selected after the stop range or the reverse range;

a second control means for controlling the pressure adjusting means to increase the supplied oil pressure at a small increase rate from the predetermined oil pressure during a predetermined time period; and

a third control means for controlling the pressure adjusting means to increase the supplied oil pressure at a large increase rate after the predetermined time period has elapsed,

wherein, during the predetermined time period, the supplied oil pressure is set depending on the stop-range selected time period.

As hereafter explained, Hibner fails to teach or suggest the oil pressure control device recited in claims 1 and 17.

Claim 1 recites a controller that is configured to measure, and claim 17 recites a measurement means for measuring, "a stop-range selected time period during which the stop range is selected after the reverse range." This limitation is supported by steps S13-S15 (Fig. 2) of the instant application (along with corresponding ¶¶ **[0044]-[0047]**). Steps S13-S15 teach that, after a change from a reverse range (step S13), a timer, which measures a stop-range selected time period, is initiated (step S14). The stop-range selected time period continues to be measured when the stop (neutral) range is selected (step S15). Further, the stop-range selected time period (as measured by the timer) is subsequently determined (step S18) and compared to a predetermined time period (step S19). Quite simply, Hibner fails to teach or suggest a controller (or measurement means) that measures a stop-range selected time period and, therefore, Hibner fails to teach or suggest the first of the two above-italicized limitations in claims 1 and 17.

Moreover, as Hibner fails to teach or suggest the first of the two above-italicized limitations, Hibner also necessarily fails to teach or suggest the second of the two above-italicized limitations in claims 1 and 17. Specifically, Hibner also fails to teach or suggest that "during the predetermined time period, the supplied oil pressure is set depending on the stop-range selected time period." Support for this limitation is provided in steps S19/S20 and S19/S21 (Fig. 2). Specifically, if the stop-range selected time period, as measured by the timer, is less than a predetermined time period (step S19), subroutine C is performed (step S20) such that the supplied oil pressure is small; subroutine C is detailed in Fig. 5A. As a result of subroutine C, a lower clutch pressure is applied to the forward clutch so that interlock (*i.e.*, a situation in which both the forward and reverse clutches engage the planetary gear) is avoided. In contrast, if the stop-range selected time period, as measured by the timer, is greater than or equal to the predetermined time period (step S19), interlock is unlikely and, therefore, subroutine B, which supplies a large oil pressure, is performed (step S21); subroutine B is detailed in Fig. 4A.

As Hibner fails to teach or suggest at least the two above-italicized limitations of claims 1 and 17, Hibner can not be used to reject these claims, or any claim dependent thereon, under 35 U.S.C. § 102(b). Moreover, as claims 2-4 depend from claim 1, each of these dependent claims is also allowable over Hibner, without regard to the other patentable limitations recited therein. Accordingly, a withdrawal of the rejection of claims 1-4 and 17 is both warranted and respectfully requested.

B. Claims 5-8 and 18

As amended, claim 5 (*i.e.*, the claim from which claims 6-8 depend) recites, with italic emphasis added:

> An oil pressure control device for use with a vehicle transmission, which transmission has a shift lever that is configured to select a range from among a drive range that advances the vehicle, a reverse range that reverses the vehicle, and a stop range that stops the vehicle, wherein the vehicle has forward and reverse frictional-engagement devices that convert a drive force generated by an engine to a drive force that advances the vehicle or a drive force that reverses the vehicle, wherein the forward frictional-engagement device is engaged by oil pressure in the drive range, wherein the reverse frictional-engagement device is engaged by oil pressure in the reverse range, and wherein both the forward frictional-engagement device and the reverse frictional-engagement device are released in the stop range, the oil pressure control device comprising:
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> a pressure adjusting device that engages or releases the forward frictional-engagement device or the reverse frictional-engagement device by supplying the oil pressure to one of the forward frictional-engagement device and the reverse frictional-engagement device;
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> a sensor that detects a range selected by the shift lever; and
>
> a controller that controls the pressure adjusting device based on a signal from the sensor, *wherein the controller is configured to measure a stop-range selected time period during which the stop range is selected after the drive range*, and wherein the controller functions to control the pressure adjusting device to:
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> to supply an initial oil pressure to the reverse frictional-engagement device and subsequently decrease the supplied oil pressure from the initial oil pressure to a predetermined oil pressure, when the reverse range is selected after the stop range or the drive range;
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> increase the supplied oil pressure at a small increase rate from the predetermined oil pressure during a predetermined time period; and
>
> increase the supplied oil pressure at a large increase rate, after the predetermined time period has elapsed,
>
> *wherein, during the predetermined time period, the supplied oil pressure is set depending on the stop-range selected time period.*

As amended, claim 18 similarly recites, with italic emphasis added:

> An oil pressure control device for use with a vehicle transmission, which transmission has a shift lever that is configured to select a range from among a drive range that advances the vehicle, a reverse range that reverses the vehicle, and a stop range that stops the vehicle, wherein the vehicle has forward and reverse frictional-engagement devices that convert a drive force generated by an engine to a drive force that advances the vehicle or a drive force that reverses the vehicle, wherein the forward frictional-engagement device is engaged by oil pressure in the drive range, wherein the reverse frictional-engagement device is engaged by oil pressure in the reverse range,

and wherein both the forward frictional-engagement device and the reverse frictional-engagement device are released in the stop range, the oil pressure control device comprising:

pressure adjusting means for adjusting the oil pressure from a pump, and for engaging or releasing the forward frictional-engagement device or the reverse frictional-engagement device by supplying the adjusted oil pressure to one of the forward frictional-engagement device and the reverse frictional engagement device;

sensor means for detecting a range selected by a driver of the vehicle;

measurement means for measuring a stop-range selected time period during which the stop range is selected after the drive range;

first control means for controlling the pressure adjusting means to supply an initial oil pressure to the reverse frictional-engagement device and subsequently decrease the supplied oil pressure from the initial oil pressure to a predetermined oil pressure, when the reverse range is selected after the stop range or the drive range;

second control means for controlling the pressure adjusting means to increase the supplied oil pressure at a small increase rate from the predetermined oil pressure during a predetermined time period; and

third control means for controlling the pressure adjusting means to increase the supplied oil pressure at a large increase rate after the predetermined time period has elapsed,

wherein, during the predetermined time period, the supplied oil pressure is set depending on the stop-range selected time period.

As hereafter explained, Hibner fails to teach or suggest the oil pressure control device recited in claims 5 and 18.

Claim 5 recites a controller that is configured to measure, and claim 18 recites a measurement means for measuring, "a stop-range selected time period during which the stop range is selected after the drive range." This limitation is supported by steps S33-S35 (Fig. 2) of the instant application (along with corresponding ¶¶ **[0050]-[0053]**). Steps S33-S35 teach that, after a change from a drive range (step S33), a timer, which measures a stop-range selected time period, is initiated (step S34). The stop-range selected time period continues to be measured when the stop (neutral) range is selected (step S35). Further, the stop-range selected time period (as measured by the timer) is subsequently determined (step S38) and compared to a predetermined time period (step S39). Quite simply, Hibner fails to teach or suggest a controller (or measurement means) that measures a stop-range selected time period and, therefore, Hibner fails to teach or suggest the first of the two above-italicized limitations in claims 5 and 18.

Moreover, as Hibner fails to teach or suggest the first of the two above-italicized limitations, Hibner also necessarily fails to teach or suggest the second of the two above-italicized limitations in claims 5 and 18. Specifically, Hibner also fails to teach or suggest that "during the predetermined time period, the supplied oil pressure is set depending on the stop-range selected time period." Support for this limitation is provided in steps S39/S40 and S39/S41 (Fig. 2). Specifically, if the stop-range selected time period, as measured by the timer, is less than a predetermined time period (step S39), subroutine C' is performed (step S40) such that the supplied oil pressure is small; subroutine C' is detailed in Fig. 5B. As a result of subroutine C', a lower clutch pressure is applied to the reverse clutch so that interlock is avoided. In contrast, if the stop-range selected time period, as measured by the timer, is greater than or equal to the predetermined time period (step S39), interlock is unlikely and, therefore, subroutine B', which supplies a large oil pressure, is performed (step S41); subroutine B' is detailed in Fig. 4B.

As Hibner fails to teach or suggest at least the two above-italicized limitations of claims 5 and 18, Hibner can not be used to reject these claims, or any claim dependent thereon, under 35 U.S.C. § 102(b). Moreover, as claims 6-8 depend from claim 5, each of these dependent claims is also allowable over Hibner, without regard to the other patentable limitations recited therein. Accordingly, a withdrawal of the rejection of claims 5-8 and 18 is both warranted and respectfully requested.

CONCLUSION

For the aforementioned reasons, claims 1-8, 17, and 18 are now in condition for allowance. A Notice of Allowance at an early date is respectfully requested. The Examiner is invited to contact the undersigned if such communication would expedite the prosecution of the application.

Respectfully submitted,

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